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AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning at page 1, line 11 through page 2, line 3, as follows:

As will be explained with more details below, in a mobile communication system transmission conditions on a connection (communication connection or signaling connection) between a subscriber station and a base transmission station are monitored and the need for an inter-frequency or inter-system handover is detected, e.g. when the transmission conditions deteriorate. When the need for an inter-frequency or inter-system handover is detected, an inter-frequency measurement trigger signal is generated to indicate the need for an inter-frequency or inter-system handover and to initiate inter-frequency measurements on a different frequency than currently used. In response to the trigger signal inter-frequency measurements are carried-out on one or more different frequencies and if a suitable new frequency has been found ~~the actual~~ an actual inter-frequency or inter-system handover takes place. Hereinafter, the term "handover" is used to designate an inter-frequency handover or an inter-system handover, even if not explicitly stated.

Please amend the paragraph beginning at page 2, line 25 through page 3, line 15, as follows:

With respect to a conventional method for triggering IF~~[[]]~~ measurements in a mobile communication system, Fig. 1 shows a general overview of a telecommunication system TELE which comprises at least two different mobile communication systems T1, T2. A subscriber station, e.g. a mobile station MS, which is operable in the first mobile communication system T1, may also be operable in the second mobile communication system T2. Within each mobile communication system T1, T2 the mobile station MS can

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move around different cells S1, S2, S3, S1', S3' and C1-C6. Due to different handover criteria the mobile station MS may perform an inter-frequency handover within the same system or an inter-system handover to/from the other system. It should be noted that the present invention is equally well applicable for triggering an inter-frequency handover within the same system and/or an inter-system handover and Fig. 1 only shows two mobile communication systems T1, T2 as an example where both such handover procedures may take place.

Please amend the paragraph beginning at page 5, line 22, through page 6, line 3, as follows:

The network control means RNC comprises a paging flag sending means PFSM for sending a paging flag to the mobile station MS when a signaling communication link has already been established between the subscriber station MS and the network. For example, when the mobile station MS has been switched on and has been registered in the network, the subscriber station is in a registered and non-active mode of operation. A standby operation means SOM holds the subscriber station in such a non-active mode of operation. In such a non-active mode of operation the operation of the subscriber station MS is invoked by receiving the paging flag PF from the network control means RNC, namely when a call is pending for the subscriber station ~~SS-MS~~ and when a communication connection is to be set up to the subscriber station MS.

Please amend the paragraph beginning at page 6, line 5, as follows:

Fig. 2 shows a general flow chart of a method for carrying-out an inter-frequency or inter-system handover in a mobile communication system when a signaling connection or a communication connection is set up. In step ST11 a handover means HORM (HandOverR Means) situated in the network control means RNC or the mobile station MS

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monitors the network performance regarding the capacity/coverage aspects as explained above. In step ST12 the handover means HORM decides whether in principle a handover is necessary according to the criteria determined in step ST11. If so ("Y" in step ST12), the mobile station is triggered to perform inter-frequency measurements in step ST13.

More particularly, in step ST13 an IF measurement trigger signal ~~IFTS~~ is ~~output~~ outputted by the handover means HORM. As indicated in Fig. 1, the IF-measurements means IFMM can be triggered by a mobile-evaluated-handover trigger signal ~~IFTS~~ or a network-evaluated-handover trigger signal IFTS in step ST13.

Please amend the paragraph beginning at page 6, line 24, through page 7, line 14, as follows:

In order to perform a fast and reliable inter-frequency handover when there is the need for such a handover, it is advantageous to provide the outputting of a reliable trigger signal IFTS in either the network control means RNC and/or in the mobile station MS. Of course, in order to provide a well-designed trigger procedure, there is not a single triggering condition that needs to be monitored in step ST11 and which will eventually trigger the mobile station MS to perform IF-measurements on other frequencies or systems. Usually, a couple of conditions are monitored in step ST11 and must be fulfilled that the trigger signal is ~~output~~ outputted in step ST13. Such conditions may for example comprise an excessively high output power from either the down-link (network to subscriber station) connection or the up-link (subscriber station to network) connection and/or a high load in the cell. If for example the network detects by measuring the uplink-interference a high load in the cell, it will attempt to trigger IF-measurements and thus a handover to a different cell or a different system. Likewise, if transmission conditions deteriorate, the mobile station MS is triggered to more and more increase its output

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power and therefore a high output power also indicates the need for IF-measurements and thus the need for a handover.

Please amend the paragraphs beginning at page 7, line 16, through page 8, line 33, as follows:

The prior art reference TS 25 231 V0.3.0, technical specification: Third Generation Partnership Project (3GPP); Technical specification group (TSG), radio access network (RAN); working group 1 (WG 1); Physical Layer-Measurements in the IS 95 standard, dated June 1999 (hereinafter referred to as reference [1]) describes in particular in chapters 3., 4., 5.1.2 a number of conventional measurement trigger criteria. In the mobile communication system described in reference [1] both a network handover means HORM and a subscriber station handover means HORM monitor the performance of the radio-link (RL) and can request a handover. For example, the network handover means HORM monitors the down-link by measurement reports from the subscriber station MS. The network handover means HORM also monitors the traffic load. As explained above, a hand-over evaluated by a mobile station MS is called a mobile-evaluated hand-over, abbreviated MEHO. A hand-over evaluated by the network is called a network-evaluated hand-over, abbreviated NEHO. As indicated in Fig. 1, since the mobile station MS and the network control means RNC each ~~comprise~~ comprises a handover HORM each can initiate a handover according to the triggering conditions which are respectively monitored. The four basic criteria during the monitoring in step ST11 in the prior art are the "base station traffic load exceeded" condition, the "distance limits exceeded" condition, the "pilot strength below a predetermined threshold" condition and the "power level exceeded" condition as will be explained below and as is described in the aforementioned reference [1].

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Firstly, regarding the condition "base station traffic load exceeded", the network handover means HORM determines the necessity for a handover by monitoring loads at all base stations BS in the mobile communication system T1 and outputs the IF measurement trigger signal IFTS in order to balance loads between all base stations, in order to achieve a higher traffic efficiency. For example, the network handover means HORM outputs the trigger signal in step ST13 whenever the load at a base station exceeds a predetermined load threshold.

Secondly, regarding the condition "distance limits exceeded" the subscriber handover means and/or the network handover means HOM are adapted to determine the necessity for the handover on the basis of a supervision of the distance between a base station BS and the subscriber station MS. The distance between the relevant base station and the subscriber station can be determined in a synchronized system. Therefore, the trigger signal IFTS is ~~output~~ outputted in step ST13 whenever the measured distance exceeds a predetermined distance.

Please amend the paragraphs beginning at page 9, line 1, through page 10, line 2, as follows:

Thirdly, regarding the condition "pilot strength below a predetermined threshold", the subscriber handover means and/or the network handover means are adapted to determine the necessity for a handover on the basis of a supervision of a measured pilot signal strength falling below a predetermined power threshold. As is illustrated in Fig. 3-1 and in Fig. 4-1, in modern mobile communication systems a data transmission between a base transceiver station RBS and a subscriber station MS is carried-out by transmitting data, frames FR and the transmission frames FR consist of a control portion CP and a data portion DP. This is true for CDMA frames (Fig. 3-1) and TDMA frames in GSM (Fig. 4-1) The control portion CP consists of at least of pilot symbols ~~PS~~ and preferably

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also of other control symbols CS. For example, each base station BS may transmit a pilot signal PS of constant power on the same frequency. The subscriber station MS can monitor the received power level of the received pilot signal and can thus estimate the power loss on the connection between the base station BS and the subscriber station MS. Using the pilot signal strength for estimating the path loss, the subscriber handover means HORM outputs the trigger signal IFTS in step ST13 if the path loss is greater than a predetermined path loss threshold.

Fourthly, regarding the condition "power level exceeded" the subscriber handover means and/or the network handover means are adapted to determine the necessity for a handover on the basis of a supervision that in response to a power increase ~~command~~ commanded by a base station BS a subscriber power adjustment module PAN (shown in Fig. 1 in the mobile station MS) is unable to further increase its power on the up-link of the communication connection CC.

Please amend the paragraph beginning at page 15, line 9, through line 31, as follows:

As already discussed above with reference to Fig. 3-1, in a CDMA communication system the data communication is performed by exchanging data frames FR consisting of a plurality of time slots TS1... TS15. Each time slot comprises a control portion CP and a data portion DP. As described in the aforementioned reference [2] and as also indicated with step ST21' in Fig. 3-2 and in Fig. 3-1, it is also possible to carry out the data transmission in a compressed mode (also called slotted mode) in order to create some time for the IF measurement. For this purpose the network control means RNC comprises a compressed mode setting means CMSM in which the data contained in the data portion DP is compressed, i.e. concentrated to a smaller part of the frame, resulting in an idle time portion ITP. The subscriber station MS comprises a compressed mode determining

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means CMDM which determines i.e. realizes - being informed about the compressed mode of transmission via ~~signalling~~ signaling or some information sent from the compressed mode setting means CMSM of the network control means RNC - the compressed mode of operation. If such a compressed mode of operation is detected, the subscriber station MS enters a compressed mode of operation and performs the IF measurements in the idle time IT in step 5T21" in Fig. 3-2.

Please amend the paragraph beginning at page 16, line 1, through line 10, as follows:

In a CDMA system such a concentration of information is achieved by reducing the processing gain $G = \text{chips/information bits} = 1/\text{SF}$, e.g. by decreasing the spreading factor SF. Another possibility how the concentration of information can be achieved is by changing the channel coding scheme, e.g. from $r = 1/3$ to $r = 1/2$. Due to the compressed mode of operation a time interval ~~IT-TI~~ is generated in which the IF measurements can be carried out by the IF measurement means IFMM in the subscribed station MS.

Please amend the paragraph beginning at page 21, line 28, through page 22, line 12, as follows:

This object is solved by a subscriber station (~~claim 1~~) of a mobile communication system having at least one base transceiver station and a network control means, including an inter-frequency IF measurement means adapted to perform IF measurements, characterized by a time interval signal detection means adapted to detect in a transmission from said network control means an IF measurement time interval indication signal indicating a time interval of an established connection between said subscriber station and said base transceiver station in which IF measurements are to be

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carried out by said subscriber station, wherein said IF measurement means is adapted to perform said IF measurements in said time interval indicated in said IF measurement time interval indication signal.

Please amend the paragraph beginning at page 22, line 13, through page 22, line 29, as follows:

This object is also solved by a method (~~claim 13~~) for performing inter-frequency IF measurements in a subscriber station of a mobile communication system having at least one base transceiver station and a network control means, characterized by the steps of selecting, during a connection between said subscriber station and said base transceiver station, an IF measurement time interval in a network control means and sending from said network control means to said subscriber station an IF measurement time interval indication signal indicating said time interval of said connection in which said IF measurements are to be carried out by said subscriber station; detecting said IF measurement time interval indication signal in said subscriber station; and performing said IF measurements in said subscriber station in said time interval of said connection as indicated by said IF measurement time interval indication signal.

Please amend the paragraph beginning at page 22, line 30, through page 23, line 18, as follows:

This object is also solved by a mobile communication system (~~claim 33~~) comprising at least one subscriber station including an inter-frequency IF measurement means adapted to perform IF measurements and at least one base transceiver station and a network control means for performing data transmissions with said subscriber station during a connection, characterized by said network control means comprising an IF

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measurement time interval selecting means adapted to select a time interval of said connection in which said subscriber station is to carry out IF measurements and adapted to send to said subscriber station an IF measurement time interval indication signal indicating said time interval; and said subscriber station comprising a time interval signal detection means adapted to detect in a transmission from said network control means said IF measurement time interval indication signal indicating said time interval, wherein said IF measurement means is adapted to perform said IF measurements in said time interval indicated in said detected IF measurement time interval indication signal.

Please amend the paragraph beginning at page 23, line 19, through page 23, line 29, as follows:

This object is also solved by a network control means (~~claim 44~~) of a mobile communication system for controlling data transmissions between at least subscriber station and at least one base transceiver station on an established communication connection, characterized by said network control means comprising an IF measurement time interval selecting means adapted to select a time interval of a connection in which said subscriber station is to carry out IF measurements and adapted to send to said subscriber station an IF measurement time interval indication signal indicating said time interval.

Please amend the captioned appearing on page 30, line 15, as follows:

DETAILED DESCRIPTION PRINCIPLE OF THE INVENTION

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Please amend the paragraph beginning at page 31, line 8, through line 16, as follows:

Therefore, using the time interval selection means TISM in a network control means ~~RMC~~ RNC and the time interval signal detection means TISDM in the subscriber station, a time interval can be specified from the network control means RNC to the subscriber station MS. Therefore, the subscriber station MS does not have to perform any determinations itself and it can entirely rely that the time interval is suitable based on the indication from the network control means.

Please amend the paragraph beginning at page 36, line 9, through line 15, as follows:

In general, in a communication system one can distinguish different types of services, i.e. delay-sensitive or loss-sensitive services. If the service type is delay-sensitive, then it is most important, to some extent, that the transmitted information will be received in time rather than it is free of errors. E.g. voice is a delay-sensitive transmission.

Please amend the paragraph beginning at page 36, line 32, through page 37, line 26, as follows:

If during the communication connection between the subscriber station MS and the base transceiver station RBS (or the network control means RNC respectively) a delay-sensitive transmission is performed, the subscriber station comprises a deletion means DEL for deleting the data arriving from the base transceiver station RBS during

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said selected time interval. Such a situation may for example occur, if the network control means RNC has requested a subscriber station MS to perform measurements on another frequency or system in a specific time and period due to some criteria (e.g. high frame error rate and/or bad measurement report by mobile station and/or low received signal strength and/or high output power from network to mobile station and/or bad signal to interference ratio SIR) and the subscriber station ~~SS-MS~~ and the base transceiver station RBS have established a voice connection, i.e. a delay-sensitive service. This will likely imply a loss of slots (path of a frame) or frames on a current connection because such frames need to be deleted by the subscriber station in the time interval in which the IF measurements are carried out. In order to counterbalance this temporary degradation of the quality of service, said network control means RNC and/or said subscriber station MS ~~may each~~ may comprise a power adjustment means PAM to respectively increase a transmission power on the down-link DL and the up-link UL on the communication connection CC before the beginning of said predetermined time interval and/or after the end of said predetermined time interval.

Please amend the paragraph beginning at page 38, line 14, through line 27, as follows:

Of course, even if the transmission power on the up-link and on the down-link is increased before and after the time interval, there is still no data transmission or reception within the time interval, since the subscriber station MS is busy performing the IF measurements. Therefore, in principle the error rate will be increased. However, this ~~increase-increases~~ of error rate be compensated by the increase of the transmission power since the error rate is only calculated over an average of many data frames. Therefore, the degradation of the transmission during the IF measurement time interval can be compensated by the increase of the transmission power at the beginning or the end of the

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time interval. Therefore, an overall degradation of the quality of service does not take place.

Please amend the paragraph beginning at page 39, line 4, through line 25, as follows:

As shown in Fig. 7, in the network and/or in the network control means RNC always a transmission buffer means BUF of a predetermined size is always used for an intermediate storage of the transmission data before it is sent on the down-link of said communication connection. If the connection service type is loss-sensitive, the information flow between the network control means RNC and the subscriber station MS is not dense and the transmission buffer means BUF used during that connection is normally below a specific threshold. Thus, the network control means RNC can request the subscriber station MS to perform measurements on other frequencies/systems in a predetermined time interval and if the network/subscriber station transmits/receives more information during the specific time interval, the transmission buffer BUF temporarily stores at least a portion of said transmission data to be sent during that time interval. The network control means RNC sends the stored data to the subscriber station MS after said selected time interval has ended. That is, in this case the network control means or the subscriber station can use the spare buffer space of the transmission buffer means BUF for an intermediate storage of the transmission data.

Please amend the paragraph beginning at page 43, line 19, through page 44, line 4, as follows:

For example, when the ~~ratio~~ ratio undergoes a specific level, the network can safely assume that the data transmission rate is so low that the currently used buffer

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transmission means BUF will always be capable to temporarily (in the time interval) store the data which needs to be transmitted after the end of the time interval. The network control means RNC can also combine this with the dynamic buffer allocation. For example, when the network control means RNC detects that the transmission ratio (and/or reception ratio) exceeds a predetermined threshold, this may invariably indicate that the currently used transmission buffer means will not be capable to temporarily store all the transmission data in a predetermined time interval. Therefore, as soon as the network control means RNC detects

Please amend the paragraph beginning at page 45, line 1, through line 18, as follows:

In accordance with the fourth embodiment of the invention, a data transmission between the base transceiver station RBS and the subscriber station MS can be carried out by transmitting data frames FR in a compressed mode of operation. As explained above, in the compressed mode of operation the data is compressed in the time slots and a compressed mode determining means ~~CDDM~~-CDDM in the subscriber station MS can detect this compressed mode of operation. In the fourth embodiment of the invention IF measurements can be carried out in a number of time slots (or data frames) indicated by the IF measurement time interval indication signal TIIIS as well as a number of idle time portions of data frames where data transmission is carried out in a compressed mode. That is, according to the fourth embodiment of the invention the network informs the subscriber station MS when and for how long time it shall perform measurements on another frequency and this is used as a complement to compressed mode.